

CHSSI Projects as of 25 February 2003

LEGEND



No longer active.

Still active.

New FY03 projects.

CTA/ Portfolio	Number	Title	Organization	Account	PI Title	PI First Name	PI Last Name
CEA	07	Magnetohydrodynamic Code	AFRL/DE; Kirtland AFB	9922	Dr.	Robert	Peterkin
SIP	06	Acoustic Analysis Workbench	Space and Naval Warfare Systems Center	9931	Dr.	Keith	Bromley
IMT	02	Model-Based Test Data Validation	Arnold Engineering Development Center	9945	Mr.	Mark A.	Chappell
IMT	04	High Performance Computing in Concurrent Engineering, Modeling and Testing	Army Research Laboratory	9947	Dr.	Andrew	Mark
CCM	05	Molecular Dynamics for Energetic and Non-Energetic Materials	Naval Research Laboratory	9948	Dr.	Richard C.	Mowrey
CCM	06	Fast Parallel Total Energy Methods for Multiple Length Scales	Naval Research Laboratory	9949	Dr.	Dimitrios A.	Papaconstantopoulos
CEA	08	A Scalable, Dynamically Adaptive Mesh Software Package for General Magnetohydrodynamic and Space Weather Modeling	Naval Research Laboratory	9950	Dr.	Spiro K.	Antiochos
CEA	09	Software Development for Electromagnetic Sensing of Surface and Subsurface Targets: Simulation and Signal Processing	Army Research Laboratory	9951	Dr.	Anders	Sullivan
CEA	10	MACH3: Portable, Scalable, Parallel-Computing Magnetohydrodynamics Software for Multi-Materials in Complex 3-D Geometry	Air Force Research Laboratory, Directed Energy Directorate	9952	Dr.	Robert E.	Peterkin
CEN	05	Efficient Numerical Solutions to Large Scale Military Tactical Communications Problems via a Scalable Time Domain Method (Sc-MRTD)	Army Communications-Electronics Command	9953	Dr.	Timothy	Fleming

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CFD	08	SUPREM DSMC: Scalable, Parallel, Reacting, Multidimensional Direct Simulation Monte Carlo Flow Code	Air Force Research Laboratory/Propulsion Directorate	9954	Dr.	Ingrid J.	Wysong
CSM	05	A Next Generation Scalable Finite Element Software to Describe Fracture and Fragmentation of Solids and	Army Research Office	9955	Dr.	A.M.	Rajendran
CWO	04	Development of Two Complete Numerical Weather Prediction Systems for Heterogeneous Scalable Computing Environments	Naval Research Laboratory	9956	Dr.	Thomas E.	Rosmond
CWO	05	Satellite Radiance Variational Data Assimilation: Code Migration to Scalable Architectures	Air Force Research Laboratory/Space Vehicles Directorate	9957	Dr.	Frank H.	Ruggiero
CWO	06	Scalable Weather Research and Forecast (WRF) Model Development	Air Force Weather Agency	9958	Dr.	Jerry	Wegiel
CWO	07	Scalable Ocean Models with Data Assimilation	Naval Research Laboratory	9959	Dr.	Alan J.	Wallcraft
FMS	06	Simulation and Analysis of Heterogeneous, Large Scale Communication Networks Using COTS and GOTS Simulators	Space and Naval Warfare Systems Center	9960	Dr.	Albert	Legaspi
IMT	05	Simulation and Software Implementation of Non-Uniformity Correction (NUC) for Multi-Element Infrared Scene Projector (IRSP) Arrays	Redstone Technical Test Center	9961	Mr.	Kenneth G.	LeSueur
SIP	07	Efficient, Maintainable, Portable and Scaleable HPC Codes for Image Fusion and Signal/Image Processing	Air Force Research Laboratory/Information Directorate	9962	Dr.	Richard W.	Linderman
SIP	08	Infrared Search and Track Processing for Missile Surveillance	Space and Naval Warfare Systems Center	9963	Mr.	Dennis	Cottel
EBE	01	A Scalable Visual Software Tool for the Design of Multifunctional Multi-Mode Reconfigurable Antenna Systems for Sensing and Communications	Air Force Research Laboratory, Sensors Directorate	9964	Dr.	Gregory	Creech
EBE	02	Electromagnetic Environmental Effects Toolkit	Naval Information Warfare Center	9964	Mrs.	Rosemary	Wenchel
EBE	03	EM Design General Framework for 21st Century Integrated Military Platforms	Space and Naval Warfare Systems Center	9964	Dr.	John	Rockway

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HIE	01	High Performance Computing Software Framework for Hyperspectral Imaging	Air Force Research Laboratory, Information Directorate	9965	Dr.	George	Ramseyer
HIE	02	Real-Time Detection (ASRP) Algorithms for High Performance Computing	Space and Naval Warfare Systems Center	9965		Eric	Coolbaugh
HIE	03	Algorithms for Hyperspectral Imaging Exploitation	Army Research Laboratory	9965	Mr.	Gary	Stolovy
HIE	04	HPC PALM - High Performance Computing Pairwise Adaptive Spectral Matched Filter for Hyperspectral Image Exploitation	Air Force Research Laboratory, Sensors Directorate	9965	Dr.	Kenneth	Barnard
HIE	05	ORASIS Paralellization	Naval Research Laboratory	9965	Dr.	Jeffrey	Bowles
HIE	06	Atmospheric Correction for Hyperspectral Imaging Exploitation	Air Force Research Laboratory, Space Vehicles Directorate	9965		Gail	Anderson
FMS	07	Parallelization of the Joint Interim Mission Model (JIMM) Using Stateless Action-Ramification Events (STARE) and Cautious Optimistic Control (COC)	Naval Air Warfare Center	9966	Dr.	David	Mutschler
SLE	01	Two-level Parallelization Methodology Development	Naval Research Laboratory	9967	Dr.	Alan	Wallcraft
SLE	02	High Performance Integrated Environment Server	Naval Research Laboratory	9967	Mr.	Jane	Smith
SLE	03	Near-Shore Sediment Transport	Naval Research Laboratory	9967	Dr.	Timothy	Keen
SLE	04	High Fidelity Simulations of Littoral Environments	Naval Research Laboratory	9967	Mr.	Richard	Allard
WTI	01	Penetrator-Target Interaction	Army Research Laboratory	9968	Dr.	Raju	Namburu
WTI	02	Blast-Structure Interaction	Defense Threat Reduction Agency	9968	Mr.	Michael	Giltrud

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WTI	03	Optimization of Weapon-Target Systems Design	Army Tank-Automotive and Armaments Command Armament	9968	Dr.	Ernest	Baker
MBD	01	Design of New Materials using Computational Chemistry and Materials Science	Air Force Research Laboratory, Propulsion	9969	Dr.	Jerry	Boatz
MBD	02	Materials Design Software Suite	Naval Research Laboratory	9969	Dr.	Noam	Bernstein
MBD	03	Scalable Quasi-Continuum Software	Army Research Laboratory	9969	Dr.	Margaret M.	Hurley
SOS	01	Distributed Information Enterprise Modeling and Simulation (DIEMS)	Air Force Research Laboratory/ Information Directorate	9970		Robert G.	Hillman
SOS	02	Virtual Communication Links	Space and Naval Warfare Systems Center	9970		Robert A.	Pritchard
SOS	03	Virtual Prototyping and Accelerated Testing of DOD Composite Material Combat Systems for Long Term Prediction of Structural Integrity	Army Research Laboratory	9970	Dr.	Andrew	Mark
SPG	01	Fast Line-of-sight Imagery for Target and Exhaust-plume Signatures	AFRL/MN	9971	Mr.	Charles	Coker
SPG	02	Scene Generation with Plume Signatures for Hardware-in-the-Loop Test Application	Arnold Engineering Development Center	9971	Lt.	Nicole	Tracey
SPG	03	OpenIR: Validated Infrared Graphics Rendering Libraries for Scaleable Parallel Supercomputers	Naval Air Warfare Center, Aircraft Division	9971		John F.	Andujar
SPG	04	Hyperspectral Polarimetric (HISPOL) Scalable Target and Background Signature Model	Air Force Flight Test Center, Eglin Air Force Base	9971	Mr.	Jason S.	Coker
SPG	05	Parallel Scene Generation/Electromagnetic Modeling of Complex Targets in Complex Clutter and Propagation	Air Force Research Laboratory/	9971		Ralph	Kohler
CEA	11	High-Resolution Modeling of Acoustic Wave Propagation	Army Research Laboratory	9972	Dr.	David	Marlin
CEA	12	Scalable Computer Ocean-acoustic Propagation Engine (SCOPE)	Naval Research Laboratory	9973	Dr.	Stanley	Chin-Bing

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CFD	09	Unstructured Overset Grid Framework for Moving Body Application	Arnold Engineering and Development Center	9974	Mr.	Jere	Matty
CFD	10	Parallelizing SOCRATES - The AFRL Direct Simulation Monte Carlo Flow Field, Chemistry, and Radiation Code	Air Force Research Laboratory / PRSA	9975	Mr.	Tom	Smith
EQM	04	Simulation of Land Use Evolution and Toxics Transport on Military Installation Readiness, Training, Testing, and Security	U.S. Army Engineer Research and Development Center	9976	Dr.	James	Westervelt
CEA	13	Scalable, Adaptive Large-Scale Structural Acoustics	Naval Research Laboratory	9977	Dr.	Joseph	Bucaro
CBD	01	CB-LADITAS - Chem/Bio Ladar Detection, Identification, and Transport Analysis Simulator	Air Force Research Laboratory	9978	Mr. 1Lt	Charles Kimberly	Coker Perry
CBD	02	Scalable Software for Chemical Agent Detection and Identification	Space and Naval Warfare Systems Center	9979	Mr.	Eric J.	Coolbaugh
CBD	03	Development of Scalable Software for the Prediction of the Atmospheric Transport and Fate of Hazardous Materials	Air Force Technical Applications Center	9980	Dr.	Donald	Ferris
EBE	04	High Performance RF Propagation Server	US Army Communications and Electronics	9981	Mr.	Alan	Hansen
EBE	05	Integrated PARallel Framework for Network-Centric Warfare Simulations (PAWarS)	Space and Naval Warfare Systems Center	9982	Dr.	Albert	Legaspi
MBD	04	Molecular Packing Software for ab initio Crystal Structure and Density Predictions	US Army Research Laboratory	9983	Dr.	Betsy M.	Rice
MBD	05	Computational Tools for Nanoscale Materials Design	Naval Research Laboratory	9984	Dr.	Brett I.	Dunlap
MBD	06	Discrete Element Method for Analysis of Designed Pavement Components	U.S. Army Engineer Research and Development Center	9985	Dr.	John F.	Peters